

A  
**PROPOSAL**

In order to diminish the

**PROGRESS  
OF THE  
DISTEMPER**

AMONGST THE

**HORNED CATTLE,**

SUPPORTED by **FACTS.**

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OF THE

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P R O P O S A L

In order to diminish the  
P R O G R E S S  
O F T H E  
D I S T E M P E R  
AMONGST THE  
HORNED CATTLE,  
SUPPORTED by FACTS.

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The SECOND EDITION, corrected and enlarged.

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By MALCOLM FLEMING, M.D. K

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*Homini medendo nos succurrimus primùm,  
Sed nec Jumenta negligenda censemus.*

ANONYM.

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L O N D O N :

Printed for S. BLADON, in *Pater-noster-row*, 1755.

[ Price One Shilling. ]

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T O

The RIGHT HONOURABLE

**G E O R G E,**  
Earl of **MACCLESFIELD.**

*My* LORD,

**A**S the following Pages set forth  
a Proposal for lessening a  
grievous publick Calamity; which  
Proposal, I am convinced, both  
Reason and well-vouched Facts  
concur to support, I hesitated not  
to lay them before your Lordship,  
and beg leave to shelter them under  
your Patronage: When You was  
pleased so far to approve of the  
Method therein recommended, as



to think it not unworthy of being made publick.

IT was natural for me to apply with this View to a Nobleman, whose elevated Rank and ample Fortune have not diverted him from such an earnest and successful Pursuit of useful Knowledge, as hath greatly distinguished him in some of the most arduous and important Parts of it; and who presides over the first Society that, in modern Times, hath been established by royal Authority, for promoting physica! and mathematical Enquiries.

THAT You may long flourish an Ornament of that illustrious and useful Body, and a shining Pattern  
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of disinterested Zeal for advancing  
publick Utility, and the Dignity of  
human Nature, is the ardent Wish  
of,

My LORD,

*Your LORDSHIP'S*

*Most respectful, and*

*Most devoted Servant,*

MALCOLM FLEMYNG.

P R E-

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# REFERENCE

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and other materials in the library  
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## P R E F A C E.

*THE following Proposal was first circulated in the Neighbourhood of Brigg in Lincolnshire, near twelve Months ago; after such a manner, as that those, who were like to be Sufferers by the Cattle Distemper, then raging violently, might reap what Benefit could arise from my Paper upon the easiest Terms. I have therein, as fully as I apprehended was necessary upon the Occasion, delivered my Sentiments concerning the Nature of inflammatory epidemical Diseases, whether affecting Man or Beast; whether contagious or not contagious: described the preservative Medicine I recommended agreeably to these Sentiments: mentioned all the Facts I then could procure Information of, relating*

*relating to its Success, good or bad; endeavoured to explain the Rationale of its Operation: and lastly, have given what Directions then appeared to me worthy of being communicated to the Publick, with respect to the manner of its Exhibition.*

*Some Weeks after it was first printed and distributed, being informed that this Medicine, though it had been successful upon the whole, was, in some Instances, productive of troublesome Effects; I printed and circulated in like manner the short annexed Postscript; in which I made a Change in the Prescription, thereby intending to guard against the Inconveniences the first Formula had occasioned in Lincolnshire; which, as far as I yet know, it never was in any one Instance attended with in Yorkshire; though it had been oftener tried in the latter County than in the former. I had no good Reason to change the Method itself; but the Instruments, it seemed, were to be rendered more generally safe and commodious.*

I shall take the Opportunity of this Re-publication, to set down what further hath occurred to me since the Circulation of the Postscript, and appears worthy of the Attention of the Publick, concerning this important Matter.

And first, let me earnestly recommend a careful Preparation of the crude Antimony. I cannot help thinking that the Diarrhæas, which the Medicine occasioned in several Instances, were owing, in a great measure, if not altogether, to gross Particles of the Antimony, sticking obstinately in one or more of the four Ventricles in this ruminating Tribe of Animals; especially that called the Manifold; and there continuing to prick and irritate the nervous, and acutely sentient Membranes. Not that I blame those that prepared it: It might have been in Powder fine enough to be given with Safety to Horses, and even to the human Species, but not sufficiently divided and subtilized for Beasts, that chew the Cud; and are furnished with a greater

a                      Number,



Number, as well as a more intricate Structure, of Stomachs. Wherefore I think it quite necessary, that, after the Antimony is levigated, as directed in the Dispensatory, a large Quantity of fair Water should be poured upon the dry Powder; suppose a Quart to a Pound; and after stirring the Mixture very well together, let the grossest Parts subside, and then decant off the Water, while it is saturated with the fine Flour; which in time will fall to the Bottom, and leave the Water clear: after pouring off the clear Water, the Powder is to be dried for Use.

I still approve of the reformed Prescription contained in the Postscript, as in a general Way safer than the first, (to wit, that described in the Discourse) tho' no doubt the latter, where it proves not over violent, is preferable in point of Efficacy. And there being a stronger and a weaker Dose distinguished in the Postscript, if the weaker one is pitched upon, it ought, where it disagrees not, to be longer continued. I apprehend that ten or twelve Doses of the stronger (reformed) sort,

*sort is little enough for one Beast; and that fourteen or fifteen of the weaker is no more than what is requisite. And, as a further Improvement, I would have the calcined Hartshorn, which is added in the corrected Formula, to be prepared with Wax, as it is directed in the Pharmacopœa Pauperum. By this Contrivance it is found to guard more effectually against Irritation of the Bowels and Diarrhœa.*

*I repeat and inculcate the Caution of discontinuing the Use of the Medicine upon the first Appearance of a Looseness; and when Beasts are in a remarkable manner taken off their Food. If a Looseness is brought on, Beasts should be kept up, and properly taken care of till they are cured.*

*I think the Medicine should not be given at all to Cows with Calve, or to Calves under two or three Months old; at least, not unless the Improvements I have in this Preface suggested, of which no Trial, as yet, hath been made, should render the Balls*

*in a remarkable Degree milder than they were before.*

*Lastly, I think in very cold, or very rainy Weather, Beasts should be kept up, at least in the Night-time, while they have the Medicine given them.*

*If this Method were carefully and generally put in Execution in any large District, where the Cattle-Dissemper is raging with Violence and Havock, I am convinced, that more than half the Number of Beasts, which would otherwise perish, might be saved. The Medicine, as I have observed in the Discourse, acts in a double Capacity, both as a Preservative, and as a Preparative. If a Beast, after having taken its Complement, or near its Complement, of Doses of the Antidote, is seized with the Dissemper, while the Impression of the Medicine may reasonably be thought to continue, suppose three or four, or perhaps more Weeks, after taking the last Dose, it never fails, as far as I have been informed, of having it slightly, and recovering*



recovering easily; at least, to be more favourably handled, than the Generality of Beasts are under the same Circumstances, who have not had that Advantage. Mr. Brough of Hasel's, three Cows mentioned in the Proposal, are no inconsiderable Instance of what I assert. And I had Advice not long ago from Horncastle, that a good many Beasts in that Neighbourhood, the precise Number I know not, but have Reason to believe it to be not less than eight or ten, to which the reformed Medicine was given, were all saved. They either escaped the Contagion altogether; or, in a short Time after taking the Balls, had the Distemper slightly, and got over it with Ease; and that at a Time when it was there highly destructive.

On the other hand, if Beasts by Virtue of the Preservative escape, for a Season, the contagious Influence of the Air and Soil, they are in that case in no worse a Condition, than if they had never been in danger of catching the epidemical Infection. But it is not to be expected that,  
after

*after the Effects of the preventive Course are entirely over, they should stand Proof against the Distemper ever after; if it should either continue very long in the same Place, or revisit it after some considerable Time; or if they should meet with it elsewhere upon being removed. And upon this Account it may sometimes be prudent to repeat the preventive Course to the same Beasts.*

*If the Inoculation of Calves could be brought generally to answer, all the Trouble and Charge, my preventive Method requires, would in a short Time be justly superseded—I heartily wish Success to it; and that it may do the highest Honour to the worthy publick-spirited Gentleman, who first proposed it; and even put it in Execution with some encouraging Success. But I apprehend from the Nature of the Thing, that the Cattle-Distemper cannot be so certainly communicated by the Mucus or Saliva of an infected Beast, as the Small-pox by the Matter of the Pustules. The latter is the genuine, unmixed, ripe*

Seminiū of the Disease it belongs to; and is found to propagate it, when used in the smallest Quantity; whereas the Mucus is a natural Humour, which, in the Cattle-Distemper, may be more or less vitiated, in common with the other Juices of the Animal: and probably often so little, as not to produce the Disease in the Subject it is applied to. But the Operation, we have mentioned, hath these Advantages, to wit, that if no Distemper is brought on thereby, there can be no great Difficulty in healing up the Wound, and Consequently little or no Danger incurred: If the Disease is imparted by Inoculation, it is reasonable to expect that it will prove milder in a general Way, than that of the Beast the infecting Matter was taken from: And lastly, there is not the least Grounds to fear lest the Calf should be again visited by the same Disease. I apprehend that Inoculation will stand the better Chance of bringing on the Distemper, if the Subject, it is performed on, is as young as Safety will permit; the Vessels being then most bibulous; and the animal

Oeconomy



*Oeconomy most easily put in Disorder; and if the infecting Matter is taken from a Beast labouring under a pretty smart kind of it, even tho' attended with some Appearance of Danger; and not before its Height: The Small-pox have been safely as well as effectually inoculated from a dangerous confluent Sort. And before the Height the Seminium of the Disease is not ripe. But even in case the Inoculation of Calves should be found so successful as universally to prevail, the Method I recommend will not be altogether useless; for by being properly modelled, and adapted to Circumstances, and Junctures, it may, I am perswaded, prevent Contagion, and likewise act as a Preparative, in any epidemical Infection of the inflammatory kind, not only in horned Cattle, but likewise in any other Quadrupeds, that civil Society may think worthy of Preservation; and even in the human Species.*

Brigg in Lincolnshire,  
June 24, 1755.



A

## PROPOSAL, &c.



ALL acute and epidemical Diseases, whether affecting Man or Beast, from their highest and most malignant Degree, which is termed Pestilence or Plague, to the lowest and mildest, are propagated and spread either by the common Vehicle of the Air, and its immediate Effects, or by Contagion from some infected Animals to others that were found before, or by a Mixture or Co-operation of both these Causes.

AIR, by being drawn into the Lungs in breathing, touches all their inward Surface, as far as the smallest Branches of the Wind-pipe are spread. It is mix'd with

B

the

the Food in chewing, and swallowed down into the Alimentary Canal, and therefore touches, or may touch, every Part of its inner Surface from the Mouth to the Anus.

AIR mixes itself in some Quantity with Water, and every other Fluid that can serve for Drink to Animals; not indeed in an elastic State, but divided, and, as it were, dissolved into minute Particles; which, while kept asunder by the intervening Parts of the Fluid they are dissolved in, do not exert their Spring: And in this Manner it makes its Way into the Lacteals, and enters into the Composition of the Blood, and other Juices.

AIR likewise, by coming into Contact with the Food of Animals, especially Grass and other Vegetables, which are constantly exposed to the open Atmosphere, may impregnate them more or less with its Qualities, good or bad, wholesome or noxious, before they are taken in.

MORE-



MOREOVER, Animals not only perspire or exhale from their Bodies into the Atmosphere, but also attract and absorb from it, as undoubted Experiments demonstrate. The Human Species being naked, no doubt, absorbs more than Quadrupeds that are covered with Hair: But the latter are not without Inlets sufficient to receive epidemical Infection in the Way of Absorption; the Mouth, the Cavity of the Nostrils, the inner Surface of the Lungs and alimentary Canal, not to mention other Passages less considerable in this Respect, are every where thick set with extremely minute bibulous Vessels of the venous Kind; which, after the Manner of capillary Tubes, attract more or less of the aqueous Particles of the ambient Air, and what is intimately mix'd with or dissolv'd in them; and send what is so drawn in into larger Veins, and into the great Channel of the Circulation. So that when the Air is impregnated with Qualities and Contents, that are noxious either to various Kinds of Animals, or to one Species only, whatever the original Cause, whatever the Nature of that Impregnation be, there are

more Ways than one by which they may be infected, without receiving any Contagion from another Animal previously tainted; which other Manner of the Propagation of an epidemical Disease I proceed next to consider.

CONTAGION, or, as it is vulgarly expressed, Smitling, may be defined the Communication of a Distemper, by Substances or Effluvia, proceeding from the Body of an Animal previously labouring under the same Distemper, coming into Contact with, and actually infecting, the Body of another Animal that immediately before was sound.

THAT some acute Distempers, and more especially such as manifest a remarkable Degree of Putridity, are contagious in the Sense I have just now explained, cannot be doubted without running counter to the common Sense of Mankind: To mention no other, the Small-pox, which seems to bear a remarkable Affinity with the Disease of the Horned Cattle, hath been universally deem'd such, even

even before the demonstrative Experiment of Inoculation was known amongst us.

THE Substances or Effluvia proceeding or emitted from infected Animals, which are deemed contagious, may be enumerated their perspirable Matter, Sweat, Breath, Dung, Urine, Pus, or Matter of whatever Kind; their different Juices, especially such as are most affected by the Distemper; (the *Saliva* of mad Dogs for Example) and lastly, Steams or Odours, either by the Disease while the Animal is alive, or by Putrefaction after it is dead.

THE best Physicians, after observing the Appearances, Nature, and Manner of Propagation of such Diseases as become general, or epidemical, or contagious, have entertained an Opinion, that there is a considerable Analogy between these and Vegetables, that are propagated solely or chiefly by Seeds, in this Respect, *to wit*, that as these Plants do not leave a new Offspring after them, unless their  
Seeds



Seeds arrive at, or very nigh, their Maturity; in like Manner the Distempers in Question propagate themselves, and exert their contagious Power chiefly, if not solely, after they are past their Height; and that the critical Discharges issuing from Animals infected by them are, with respect to these Bodies, what ripe Seeds are to the Vegetables above specified.

WE shall not pretend to explain the particular Manner in which contagious Substances act; nor would it be of any Use to do it here where the Drift is purely practical; but shall proceed to consider Contagion, when united and co-operating with Air impregnated with noxious Qualities, and productive of an epidemical contagious Disease.

IN such a State of the Air, antecedently to Contagion, these individual Animals only are first infected, that are most susceptible of the Disease the Air is disposed to produce; the rest remain sound: But every Animal that is infected,

ed, if the Disease is permitted to run thro' all its Stages, especially if it be a malignant Sort, adds to the common Store-house of Infection, by sending a fresh Recruit of noxious Particles into the aerial Mass; and no doubt these Particles, bred and exalted within the Body of an Animal, labouring under a malignant Sort of the raging Disease, will often be more catching and deleterious than those that floated in the Air antecedently to actual Infection. At the same time every Animal smitten with Contagion is likewise acted upon by the general unavoidable Cause, *to wit*, the noxious Quality of the Air it breathes; so that here both concur. The greater the Number of infected Animals is, the greater will be the Chance of the Contagion's spreading from one Animal to another; and the more the Air will be defiled and poisoned; and until the State of the Air is changed for the better, the Disease must increase both in Malignity and Frequency, while there remain Subjects enough to be acted upon by its baneful Influence.

THUS

THUS much we thought fit to promise, that what follows may be the more clearly understood.

THE present Distemper amongst Horned Cattle, when in any remarkable Degree violent and dangerous, being an acute inflammatory putrid Fever, we may by the Laws of fair Analogy, and in Prudence ought to look upon it as contagious, unless Experience shews the contrary. But Experience, to say the least of the Matter, rather inclines us to believe it is contagious than otherwise: When it gets amongst the Cattle of a Country Town or Village, it commonly runs thro' the greatest Part of them. The Effects of separating the sound from the infected have been found, as I am informed, oftener salutary than fruitless. And lastly, the putting Cattle to Death when the Infection first manifestly appeared upon them, or several Days before its Height, and quickly burying them, in Obedience to a Royal Proclamation, hath, as I understand, proved signally successful in  
stopping



Stopping the Progress of the Distemper, in Places where these Orders were strictly put in Execution. In short, by what I can learn, there are pretty nearly as valid Reasons to believe it to be contagious, as there were to think the Small-pox so before Inoculation was known amongst us; which if any Body had presumed to doubt of, he would have been laugh'd at. But this I mention here, not because my Proposal is in the least affected, whether the Distemper is contagious or not; but that I may take an Opportunity to advise, in Point of Prudence, such of my Readers as may have Beasts infected, to separate the sound from them as soon as possible; and, if it is in their Power, to send the sound into other Pastures, and let the infected remain on the Spot where they were taken ill, rather than remove the latter, and not shift the former. The Reason of this Precept is obvious; it is certain the Air or Soil is in some Degree noxious; where Beasts fall ill without Contagion, which I suppose to be the Case: But we have not the same Grounds to suspect the Salubrity of another Place,

even at a very moderate Distance, till the Event shews it to be in like Manner dangerous: And Separation is necessary, because it is highly probable, the Distemper is contagious.

I now proceed to give a true Account of some Facts, which have induced me to publish this short Discourse.

SOME Time in *April* 1748, the Distemper made its Appearance, for the first Time, amongst the Cows about the Gates of *Hull*, where I then practised Physick. Before the 6th of *May* following above twenty Cows died of it, not one recovering that was seized. In this Juncture I considered within myself what could be done, in order to be of Service to the Place and its Neighbourhood. The Royal Proclamation I have mentioned had been already published, of the Wisdom of which I was thoroughly convinced; so that there was no Room left for directing any Remedies to cure the Distemper, when actually appearing; that would have been encouraging People not

not to put their Beasts to Death as the Royal Authority had ordered, in Hopes of their recovering by Virtue of Remedies; and so running counter to the Intention of the Proclamation; which, on my Side, had been both presumptuous and criminal; and might, upon the whole, have proved pernicious to the Neighbourhood. It only remained then to think on some cheap safe inward Medicine, to prevent such Beasts as remained sound from being infected: It was obvious to conclude, if that could be done, that not only some of the Cattle in imminent Danger of being seized might be saved, but the Fomes or Fewel of the Infection would be hindered from spreading and multiplying, as every fresh infected Beast, besides the Chance of tainting others in the Way of Contagion, adds fresh Supply to the original Source of Malignity, *to wit*, the noxious Disposition of the Air and Soil: And if a Truce could be so obtained for a remarkable Space of Time, suppose two or three Months, or even much less, the Quality



of the Air might in that Time change  
for the better,

ACCORDINGLY I had an Halfpenny  
printed Paper hawk'd about the Streets  
of *Hull*, on the above-mentioned 6th  
Day of *May*, on which and the follow-  
ing Market-Day a pretty large Impression  
was intirely sold off. The Substance of  
which was as follows:

To

To prevent the Spreading of the present DISTEMPER amongst the HORNED CATTLE, when it makes its first Appearance in a Neighbourhood.

**T**AKE, of *Æthiops Mineral*, half an Ounce; of *Crude Antimony*, in fine Powder, an Ounce; of *Venice Treacle*, half an Ounce: Mix all together, and, with a sufficient Quantity of good Flour and fresh Milk, make one Ball, which give to a grown-up Beast every Day for twelve or fourteen Days together, when its Stomach is judged to be most empty; no particular Management of the Beasts is necessary while they are taking this Medicine. As it is solely calculated to prevent Infection, it is not to be given to any Beast that is manifestly attacked by the Distemper. I apprehend that Bleeding, by way of Prevention, is rather hurtful than beneficial.

UPON

UPON the Publication of this Paper the Preservative was given to a great many Cows: And the Consequence was, that in less than a Fortnight, the Distemper entirely ceased about the Gates of *Hull*; and did not revisit that Place till nine or ten Months after, and then was neither so frequent, nor so mortal, as it had been at first. From the 6th of *May*, the Day on which the Paper was first published, to the entire stopping of the Distemper, there died nine or ten Cows more of it, in all nine and twenty or thirty; but not one Beast that had the Medicine given it was infected.

THESE Facts I was punctually informed of, at the very Time they happened, by proper Persons I employed to make a strict Enquiry; and then minuted them down in a Memorandum-Book, from which I now transcribe them. And as I took a great deal of Pains about that Matter, and proceeded with all the Caution and Exactness I could, the Truth of them may be depended upon.



I MUST not omit mentioning here what I find likewise noted down, *to wit*, that Cows upon taking the Medicine fell off from their Milk and Feeding for some Days, which frightened their Owners, and made them readier to curse than thank the Adviser of the Preservative; but they soon recovered both, and every one of them did well without Exception.

NOTWITHSTANDING so strong an Appearance of signal Success, from the Use of the Preservative about the Gates of *Hull*, I found the Country People extremely backward to try it in other Places where the Distemper raged. However, about the Middle, or towards the End, of the same Month of *May*, I prevailed upon Mr. *Francis Brough*, a reputable and substantial Farmer in *Hasel*, (the Ferry Place, three or four Miles from *Hull*) where the Distemper was then very frequent and mortal, to give to three of his finest Cows one Ball a Day each, for ten Days successively, which was carefully done; the Consequence was, that  
all

all three remained free from the Distemper several Months afterwards: And on the *Midsummer-Day* following I saw them in their Pasture in perfect Health and excellent Order, though at the same Time the Distemper had not ceased at that Village, but was continuing its Havock within little more than an Hundred Yards of the Pasture where these Cows were grazing. Of the Truth of which he, at my Desire, then signed a Certificate, which was delivered to the late Colonel *James Gee* of *Bishop-Burton*, one of his Majesty's Justices of the Peace, and he hath very lately sent me a fresh one, which is now in my Hands, and to be seen.

THESE are the Instances of the good Effects of this Medicine, which consist with my particular Knowledge; and I hope the candid Reader will think them pretty conclusive to prove that it hath, in some Circumstances, a Virtue to prevent the Distemper for some time; for it is not to be expected that a Preservative, once administred, will operate for ever.

ever. He will be the more inclined to entertain a favourable Opinion of its Efficacy, when I assure him that no Instances of its failing have come to my Ears, which might be a Draw-back upon its imputed Virtue. I apprehend that, if there had been any remarkable Example of this Kind, I should have heard of it; as one stands a greater Chance to be made sensible of his Failures, than of his Successes; of the Harm, than of the Good, he does in the World.

BUT I hope he will be still more confirmed in the Opinion, that this Medicine is really serviceable in the Way it is directed; when the Rationale of its Operation is laid before him; to explain which I now proceed.

ÆTHIOPS Mineral being Flowers of Brimstone and crude Mercury, well rubbed and intimately mixed together, hath a Power of thinning the Blood, and opening Obstructions in the smallest Vessels. That it enters the Blood, more or less,



is not to be doubted, whatever Authors may write. I believe indeed it does not enter it as *Æthiops*, but that the Mercury and Sulphur must be separated in the Alimentary Canal, before either of them can be admitted into the Lacteals; as I have endeavoured to prove elsewhere \*. But that it does actually enter, more or less, in some Shape or other, is evident from the Effects it sometimes produces, *to wit*, loosening the Teeth, and making the Breath smell, (though it seldom or never, for aught I know, creates the slightest Salivation) and from its manifest salutary Influences on cutaneous Foulnesses. The Sulphur acts by its penetrating Quality, the Mercury by its Weight, and the extreme Divisibility of its Parts.

ANTIMONY, even crude, when finely powdered, and taken in by the Mouth, likewise enters the Blood, as appears by its Effects on cutaneous Diseases, on inveterate foul Ulcers, and particularly strumous

\* See a Proposal for the Improvement of the Practice of Medicine, p. 81.

strumous and scrophulous Sores. As it is very heavy, no doubt its Weight contributes somewhat to thin the Blood, and remove Obstructions: But it seems to be endowed with a peculiar dissolving Quality independent on its specific Gravity, as it is found by Experience to be more effectual in scrophulous Cases than Mercury itself, which is considerably heavier, and therefore it is not without good Reason that Æthiops and Antimony are joined together in the Composition of the Balls.

Now in all inflammatory Diseases, as that amongst the Horned Cattle most certainly is; there being in the Beginning a Lensor or particular Siziness of the Blood, which indisposes it for circulating freely through the capillary Arteries; what maintains the Fluidity of the Blood, and preserves the Vessels tight and permeable, cannot fail of rendering the Animal less susceptible of inflammatory Diseases in general, than it would be otherwise, by preventing morbid Cohesions from forming in the Blood and its Serum.

VENICE TREACLE is added to keep up, and moderately increase, Perspiration; from which a double Benefit may rationally be expected, *to wit*, both the Diminution of Absorption or Attraction from the tainted Atmosphere, and, in some Measure, the Expulsion of what may have been already absorbed.

INCREASED Perspiration diminishes Absorption, because the perspiring or exhaling Vessels being of the arterial Kind, and the attracting or absorbing being venous, while the former transmit their Fluids freely and plentifully, they will of course continue fuller and more distended than at other Times; and therefore diminish Absorption by compressing in some Degree the absorbing venous Canals which are promiscuously and contiguously planted amongst them; and it is plain that by increasing Perspiration, if any morbid Effluvia be already taken in, there will be a greater Chance of Nature's throwing them off by the Surface, before their Efficacy can produce a stated Disease.

AND



AND it is reasonable to think that the Venice Treacle will the more effectually promote a salutary Exhalation through the Surface; that the Æthiops and Antimony co-operate with it in scouring the small Vessels and attenuating the Juices; and at the same Time, by their Weight, increase the Momentum or Force by which the blood and Juices are propelled thro' the whole arterial System.

THOSE that entertain the Opinion that epidemical Distempers are propagated by the Multiplication of Animalcules floating in the Air, (which, for my own Part, I lay no Stress on) will not disapprove of the Composition; as Mercury and Antimony, not to mention the other Ingredients, bid as fair for killing Insects, of whatever Kind, as any Thing we know that can be given inwardly with safety.

As this Reasoning holds good with respect to inflammatory Distempers in general, contagious or not contagious, it is plain that my Proposal, as I have already said,

said, is not in the least affected, whether the Distemper amongst Cattle is or is not contagious.

If it is considered that, other Circumstances being equal, it is more difficult to cure Beasts than the human Species, because they are destitute of Reason to comprehend and distinguish their Symptoms, and of articulate Speech to communicate and explain them: That Beasts, by the Structure of their Integuments, are less fitted to throw off peccant Humours by Perspiration or Sweat: That there is a Variety of Constitutions amongst them: That the present Distemper appears in different Beasts, with different Degrees of Violence and Danger, and a considerable Diversity of Symptoms: That there are different Stages in the same Distemper, which require, each of them, different Management: That a Difference of the Seasons of the Year, Weather, Soil, &c. produces different Effects in Sickneſs as well as in Health: If these and other Heads that relate to this Subject are duly considered and weighed, it will, I believe, appear,

appear, at least, extremely probable, that no Scheme of Directions to be depended upon can be chalked out for the Cure of Beasts labouring under a violent and dangerous Sort of this Distemper; I mean none that Country Men can rationally be supposed to be capable of conducting with Skill and Precision enough to be generally successful; and therefore that the preventive Method is upon the whole preferable, especially as it has the Advantage of restraining the Seeds of the Disease from multiplying and spreading.

BUT besides the Effects of the Medicine I recommend as a Preservative, it may likewise be considered in the Light of a proper Preparative: For as long as the Change brought on by the Medicine continues in any remarkable Degree; that is, as long as the Juices remain more attenuated, and the Vessels less liable to be obstructed than they were before its Exhibition, so long, should the Distemper actually seize them, they are like to have it slighter, and get the easier rid of it; a Sickness of Blood and Obstruction of the  
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small Vessels being essential to inflammatory Distempers. And that there is more in this than bare Speculation, appears from Mr. Brough's Certificate now lying before me: His Words are, *That the three Beasts the Balls were given to continued well for a very considerable Time after, and when they did receive the Infection got clear of it soon, and with Abundance of Ease; and that it was the Opinion of his Neighbour Farmers, and Judges of Beasts, that the Balls given by Dr. Flemyng's Directions, were the Means of preserving them when in the Distemper.* I leave it to the Judgment of such Persons as may be concerned, whether this is not good Encouragement to use the Medicine, and give it a fair Trial.

BEFORE I conclude, I shall offer some more particular and exact Directions how to proceed, upon the breaking out of the Distemper in a Neighbourhood, than I chose to give at first, before a Trial was made of this Preservative.

It

IT were to be wished that the first infected Beasts were speedily put to Death, and buried, according to the Royal Proclamation. The Destruction of a few, may, no doubt, often prove the Preservation of many. As to the Number that should be destroyed, I shall not pretend to determine; but I apprehend that all should be included in the same Sentence, that are infected in the same Pasture, at the same precise Time; at least all that appear violently seized.

IF that is not done, there ought immediately to be made a Separation of the sound from the infected; and if it is practicable, in the Manner I have before directed, *to wit*, the sound ought to be removed at a Distance from the Spot where the Infection began; and not the infected be shifted, while the sound remain where they were.

THEN, without Loss of Time, the Preservative ought to be exhibited and put to a fair Trial. I apprehend that in  
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all not less than eight or ten Doses should be given to each Beast in as many successive Days. To grown up Beasts, if middling strong and large, the full quantity already directed should be given. To the smaller and weaker Sort, especially if they are Cows, two Thirds may be sufficient.

CALVES may be divided into four Classes. — Within the Month or six Weeks, I apprehend a fourth Part of the full Quantity is sufficient for a Dose. From that Period, to the fourth or fifth Month, a third Part will be proper. After that Time to the seventh or eighth, an half may be required. When they are remarkably further advanced in Growth, and near a Year old, two Thirds is a right Proportion. And in three or four Months more they may be considered as grown up Beasts, and treated accordingly.

It may happen that after the first two or three Doses a Beast may shew manifest Signs of Infection: If that should fall



fall out, it will be no valid Objection against the Usefulness of the Medicine. For as Infection of almost every Kind lurks some Time in the Body, without exerting remarkable Effects; such a Case will only prove, that the poisonous Effluvia had, before the Exhibition of the Medicine, made such an Impression, as two or three Doses could not conquer. But, *Quære*, in this Situation, Should the Medicine be continued or not? I cannot from any Observation I know of decide in this Matter. But I think it may be worth while, upon some Occasions, to make the Experiment; and I have strong Reason to believe, that if the Distemper should shew itself immediately after the fifth or sixth Dose, it will prove the milder for the Medicine's having been taken before-hand.

✍ As Venice Treacle, or Theriaca Andromachi, if genuine, and carefully prepared, is an operose Composition, and may render the Balls too expensive to some; I here give Notice, that there is in *The Pharmacopæia Pauperum*, very  
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lately published, a Receipt of a cheaper,  
and more easily made up, Theriaca;  
which, if the Quantity of Opium is dou-  
bled, to put it on a Par with the Venice  
Treacle in this Respect, is, I am con-  
vinced, very little, if at all, inferior to  
the other.

**POST.**



## POSTSCRIPT.

SINCE the Publication of the preceding short *Discourse*, I have been informed of some few Facts, which incline me to believe that the Dose of the *Æthiops Mineral*, and crude Antimony, especially the latter, there directed, is rather too large for general Use; though in the Instances I have mentioned in the *Discourse*, and which happened in *Yorkshire* six Years ago, not one Beast was lost out of many Scores, I might safely say some Hundreds, that had it given them. This it was incumbent on me not to conceal from the Publick.

THE Quantities of the Ingredients in the Preservative Medicine were regulated according to the Doses of the same that Farriers give to Horses; and as they succeeded so well at first, I had no Reason either to add to, or diminish them, till  
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## POSTSCRIPT.

farther Experience should furnish good Reasons for so doing.

If we attentively consider the different Structure of Stomachs in the Horse and Cow Kind, we shall incline to believe, that as a considerably less Quantity of Nourishment is sufficient in the latter Species than in the former, in Proportion to their Bulk; by a Parity of Reason, a less Quantity of Mercurial and Antimonial Medicines will make a suitable Impression upon them. The Horse has but one Stomach, like the human Species; Cows have four, and chew the Cud; and, particularly, two of these Stomachs, to wit, that called the Manifold, and that other of an Iron Colour, in which the Earning or Runnet for turning or curdling of Milk is prepared and kept, are furnished with many Folds and Recesses, whereby any Thing solid or adhesive must be not a little retarded in the Passage towards the Anus; and therefore Mercurial and Antimonial Medicines must have a greater Chance to be received into the Blood by absorbent venous Canals, which  
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every where open into Cavities in the live animal Body, where there is a Multiplicity of such Stomachs, than where there is but one of a more simple Structure.

I therefore, upon these Considerations, and reflecting upon two or three Instances, in which the Quantities directed in the *Discourse* had very lately troublesome Effects here in *Lincolnshire*, propose the following Change to be made in the Medicine, to wit, That the Quantity of crude Mercury should be diminished somewhat; that of the crude Antimony by one Half, or rather more; and that some Powder of calcin'd Hartshorn should be added to the Composition: This last with a View, partly to prevent a Looseness, an Effect which the full Quantity before directed hath produced in an Instance or two, and partly to absorb Acidities, which, as chemical Experiments shew, act remarkably on Mercury and Antimony, dissolving and opening them, and thereby rendering their Operations more churlish and violent. As to the Venice Treacle, or its Substitute in the *Pharmacopœia Pauperum*,

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*Pauperum*, I would have it remain undiminished, the Quantity there directed being scarce double of what may be given with Safety, at one Dose, to the human Species: And then the Composition will stand as follows:

*Take of Æthiops Mineral, made with two Parts of Flowers of Brimstone, and one of crude Mercury, very well rubbed together till all the Particles of Mercury disappear, of crude Antimony, in fine Powder, of each three Drachms for the weaker Dose, and four Drachms for the stronger Dose; of Venice Treacle, or the other Theriaca, not less in either Intention than half an Ounce; of calcined Hartshorn, in fine Powder, not less than a Drachm and a half, mix all together, and with good Flour and fresh Milk make into one Ball for one Dose to a grown-up Beast.*

I have made two sorts of Doses, one stronger and the other weaker, that the Resolute and the Timorous may chuse which they please. I, for my own Part, prefer the stronger Dose, for this Reason,  
that



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that when the Distemper first makes its Appearance in a Neighbourhood, it may be in a Train of propagating itself with Quickness and Rapidity, for aught that can be known to the contrary; and therefore such a Dose of a preventive Medicine should be thrown in, as can make an effectual Impression in a very few Days; otherwise the Progress of the Infection may get the Start of the Operation of the Antidote.

THIS is the full Dose I recommend to be given to a strong grown-up Beast; which, if it hath no remarkably troublesome or dangerous Effects, ought, I think, to be repeated every Day, for twelve or fourteen Days successively,

To weaker Beasts, and to Calves of different Ages, it ought to be exhibited in lesser Quantities, according to the Rules laid down in the *Discourse*.

UPON the whole, I apprehend that, for the Good of the Community, over-dosing, if the Quantity is not outrageously large,

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is preferable to under-dosing: But I do not disapprove of the Proposal of a sensible Grazer, which is to lay the Use of the Medicine altogether aside, when a Beast is either taken off its Feeding in a remarkable Degree, or seized with a violent Looseness.

And here we have a violent Looseness, which should be thrown in, to effectual Impaction in a very few Days; otherwise the Troops of the Intestine may get the Start of the Operation of the Antidote.

twelve or fourteen Days successively.  
think, to be repeated every Day, for  
some or dangerous Effects, ought, I  
which, if I have remarkably trouble-  
be given to a strong grown-up Head;  
This is the full Dose I recommend to

To weaker Beasts, and to Calves of  
different Ages, it ought to be exhibited  
in lesser Quantities, according to the Rules  
laid down in the Discourse.

Upon the whole, I apprehend that, for  
the Good of the Community, over doing,  
if the Quantity is not outrageously large,